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SEQUENCE LISTING

<110> NELSON, DAVID R.

<120> A LIVE, AVIRULENT STRAIN OF V. ANGUILLARUM THAT
PROTECTS FISH AGAINST INFECTION BY VIRULENT V.
ANGUILLARUM

<130> 5112

<140> 09/915,706

<141> 2001-07-26

<160> 4

<170> PatentIn Ver. 2.1

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<213> *Vibrio anguillarum*

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<213> *Vibrio anguillarum*

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Arg Pro Leu Arg Asn Glu Phe Asn Val Ala Gln Thr Ala Leu Arg Lys
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Cys Leu Asn Lys Trp Lys Ile Leu Ser Asp Ser Leu Tyr Glu Gln Phe
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Ser Lys Thr Thr Arg Asp Ile Glu Leu Ile Ser Trp Phe Val Ala Ala
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Gln Phe Leu Leu Asp Thr Thr Leu Glu Ser Ala Ala Asn Ser Leu Glu
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 145 150 155 160
 Ser Glu Glu Ser Ser Ile Leu Tyr Ala Pro Val Leu Gln Leu Pro Leu
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 Val Gly Glu Val Thr Phe Phe Asp Phe Gln Ser Ala Glu Arg Lys Gly
 180 185 190
 Glu Ile Ser Gln Leu Lys Ser Met Leu Thr Thr Thr Val Ala Gln Glu
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 Arg Phe Ala Ile Gln Phe Lys Met Glu Asn Ala Lys Arg Cys Val Thr
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 Gly Ser Gln Ser Thr Asn Phe Gly Phe Ala Lys Ser Leu Leu Thr Arg
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 Val Glu Asn Ala Leu Val His Leu Ser Gly Ile Lys Leu Ala Pro Lys
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 Glu Gly Glu Leu Pro Ser His Met Asp Thr Lys His Ile Glu Arg Ile
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 405 410 415

Ser Pro Gln Thr Pro Gln Ala Lys Pro Ser Val Ser Asp Pro Arg Ser
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<213> *Vibrio anguillarum*

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 35 40 45

Asp Ile Gly Asn Gly Thr Asn Ala Asp Ser Gly Met Val Gly Val Ser
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Glu Val Ser Val Thr Lys Glu Val Asp Gly Ala Ser Glu Asp Leu Leu
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Ser Tyr Leu Phe Asn Pro Gly Lys Asp Gly Lys Thr Val Glu Val Ala
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Phe Thr Lys Pro Ser Asn Asp Gly Gln Gly Ala Asp Val Tyr Phe Gln
 100 105 110

Val Lys Leu Glu Lys Ala Arg Leu Val Ser Tyr Asn Val Ser Gly Thr
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Asp Gly Ser Gln Pro Tyr Glu Ser Leu Ser Leu Ser Tyr Thr Ser Ile
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Pro Phe Val Val Gly Val Ile Gly Asp Phe Ser Gly His Lys Pro Glu
      35                40                45

Ser Glu Lys Val Asp Leu Glu Glu Arg Glu Phe Thr Gly Ile Asp Lys
      50                55                60

Asp Asn Phe Asp Thr Val Met Gly Gln Ile His Pro Arg Leu Ser Tyr
      65                70                75                80

Lys Val Asp Asn Lys Leu Ala Asn Asp Asp Ser Gln Phe Glu Val Asn
      85                90                95

Leu Ser Leu Arg Ser Met Lys Asp Phe His Pro Glu Asn Leu Val Asp
      100                105                110

Xaa Ile Glu Pro Leu
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